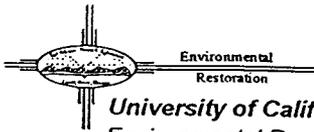


# Los Alamos National Laboratory

ENVIRONMENTAL RESTORATION



**University of California**  
Environmental Restoration, MS M992  
Los Alamos, New Mexico 87545  
505-667-0808/FAX 505-665-4747



**U. S. Department of Energy**  
Los Alamos Area Office, MS A316  
Los Alamos, New Mexico 87544  
505-665-7203  
FAX 505-665-4504



Date: April 19, 1996  
Refer to: EM/ER:96-220

Mr. Benito Garcia  
NMED-HRMB  
P.O. Box 26110  
Santa Fe, NM 87502

**SUBJECT: FINAL ACCELERATED CLEANUP REPORTS**

39-007(a)  
39-008(a)

Dear Mr. Garcia:

Enclosed are the final reports and Certifications of Completion for the voluntary corrective actions completed in Fiscal Year 1995. The reports with potential release sites (PRs) listed in the Hazardous and Solid Waste Amendments (HSWA) Module of the Los Alamos National Laboratory's Resource Conservation and Recovery Act operating permit contain our request for no further action (NFA). Upon your approval of these reports, we will submit a permit modification request for NFA of these PRs.

For PRs not listed in the HSWA Module, reports are included as informational copies for your records.

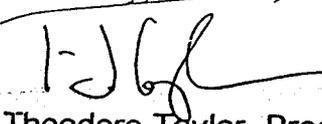
If you have any questions, please call David Bradbury at 505-665-6208.

Thank you for your timely attention to this matter.

Sincerely,

  
Jorg Jansen, Program Manager  
Environmental Restoration

Sincerely,

  
Theodore Taylor, Program Manager  
Los Alamos Area Office

JJ/TT/rfr



2409

April 19, 1996

- Enclosures: (1) Final Reports for HSWA: C-9-001, 6-007(f), 8-005, 16-016(b), 18-001(a), 19-002, 21-013(c), 21-013(d), 21-013(e), 21-024(d), 21-024(e), 21-024(h), 31-001, 33-016, 39-007(a), and 69-001
- (2) Final Reports for non-HSWA: C-0-036(a-d), C-0-041, C-10-001, C-21-027, C-36-001, 0-032, 1-001(f), 3-003(p), 3-022, 3-047(d), 3-051(c), 9-010(a-b), 16-011, 16-016(f), 20-003(c), 21-022(j), 39-002(c), 53-010, and 57-006
- (3) Certifications of Completion

Cy (w/enclosures):

- B. Driscoll, EPA, R.6, 6PD-N, (2 copies of HSWA)
- D. Griswold, ERD, AL, MS A906
- J. Harry, EM/ER, MS M992
- B. Hoditschek, NMED-HRMB
- R. Kern, NMED-HRMB
- N. Naraine, EM-453, DOE-HQ
- M. Shaner, P&PI, MS J591 (5 copies)
- N. Weber, Bureau Chief, NMED-AIP, MS J993
- J. White, ESH-19, MS K490
- S. Yanicak, NMED-AIP, MS J993
- RPF, MS M707

Cy (w/o enclosures):

- T. Baca, EM, MS J591
- D. Bradbury, EM/ER, MS M992
- T. Glatzmaier, DDEES/ER, MS M992
- D. McInroy, EM/ER, MS M992
- G. Rael, ERD, AL, MS A906
- W. Spurgeon, EM-453, DOE-HQ
- T. Taylor, LAAO, MS A316
- J. Vozella, LAAO, MS A316
- EM/ER File, MS M992

# Voluntary Corrective Action Completion Report for

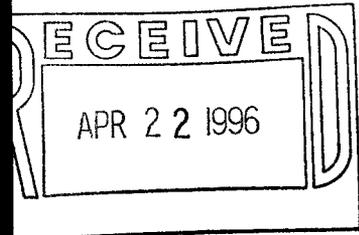
Potential Release Site  
39-007(a)  
Waste Container Storage Area

Field Unit 2

Environmental  
Restoration  
Project

January 1996  
Revision 1

A Department of Energy  
Environmental Cleanup Program



**Los Alamos**  
NATIONAL LABORATORY

LA-UR-96-445

1132

**VOLUNTARY CORRECTIVE ACTION COMPLETION REPORT  
POTENTIAL RELEASE SITE 39-007(A) -  
WASTE CONTAINER STORAGE AREA**

**DESCRIPTION**

Potential Release Site 39-007(a) is located in Technical Area (TA) -39 in the north fork of Ancho Canyon within the high explosives (HE) corridor. The site is located in a secure area approximately 1.5 miles from the security gate. It is on a concrete pad outside the northeast corner of Building TA-39-63.

The PRS was a waste container storage area where waste transformer oil was stored. This site is included in the Hazardous and Solid Waste Amendments (HSWA) Module of the Laboratory's Resource Conservation and Recovery Act (RCRA) Permit, EPA ID NM0890010515. TA-39 was established in 1953, primarily as an area for open-air HE testing and has been continuously occupied since then.

A RCRA Facility Investigation (RFI) has been completed for the site. The RFI report was submitted in April 1995. The report identified polychlorinated biphenyls (PCBs) as the chemical of concern (COC) for site cleanup. In addition, uranium, copper, and zinc exceeded their ecological screening action levels.

Uranium, copper, and zinc exceeded ecological screening criteria that are being revised per EPA. A qualitative ecological risk assessment was performed using draft criteria. The PRS was situated in an area that is disturbed by human activities, which significantly reduces the potential for sensitive ecological receptors to visit the PRS. In addition, the size of the PRS was smaller than the activity areas of ecological receptors, which also reduces the amount of time that ecological receptors could be exposed to chemicals of potential concern (COPCs) at the PRS. These site-specific factors, the PRS size, and the background disturbance levels make it unlikely that uranium, copper, or zinc contribute to a significant increase in ecological risk.

Because this PRS does not require cleanup as a result of potential ecological concerns, the cleanup will address only PCBs.

**CORRECTIVE ACTION**

Cleanup followed the approved voluntary corrective action (VCA) plan, with the following deviations. A modified confirmatory sampling plan was implemented, which added the analysis for target analyte list (TAL) metals, and eliminated analyses for gamma spectroscopy, tritium, isotopic uranium, isotopic plutonium, americium-241, strontium-90, toxicity characteristic leach procedure (TCLP) metals, volatile organic compounds (VOCs), and semivolatile organic compounds (SVOCs). The TAL metals analysis was added to identify any potential contamination by total metals that may have exceeded cleanup levels.

Gamma spectroscopy, tritium, and isotopic radionuclides were eliminated because field screening showed no radioactivity above background. The VOCs and SVOCs were eliminated because there was no visual evidence of staining and no VOCs or SVOCs were identified in the RFI report.

The number of confirmatory samples was increased from 2 to 10 based on field screening data, which indicated that the contamination at the site was not homogeneous and additional samples would be needed to ensure that no "hot spots" were missed. A nine-point sampling grid and one drainage location were identified using risk-based criteria for a statistical sampling design. Cleanup began on July 25 and was completed July 28, 1995.

The VCA consisted of excavating an irregular area (approximately 30 by 30 ft). Trash and surface debris from around Building TA-39-63 and personal protective equipment (PPE), all potentially contaminated

with PCBs, were placed in a single B-25 box. Several chunks of metal were field screened for radioactivity, which did not exceed background levels, and were placed in one 55-gal. drum. X-ray fluorescence (XRF) analysis, performed August 16, 1995, identified the metal as almost pure copper. The metal waste weighs about 200 pounds and will be recycled by the Laboratory.

The PCB-contaminated soil was excavated to a depth where field test kits (D-Tech) indicated that contamination was less than 0.5 parts per million (ppm). The soil was placed in six B-25 boxes. The area of greatest known PCB contamination (3,100 ppm) was segregated and placed in a single B-25 box.

Confirmatory sampling was performed to verify site cleanup (Figure 1). Previous RFI sampling identified copper, zinc, total uranium, and PCBs as COCs. Although copper, zinc, and total uranium exceeded their respective screening action levels (based on the conservative residential exposure scenario), they were below their respective preliminary remediation goals (PRGs), which are based on the expected site use (industrial). Consequently, PCBs were the COC for cleanup. To evaluate the confirmatory analytical data, the concentrations of analytes were compared statistically to their respective PRGs based on EPA guidance. In cases where the analytes are below their respective detection limits, no statistical analyses can be performed.

Following the excavation of contaminated soil, confirmatory sampling data showed that aroclor-1248, -1254, and -1260 were above their respective PRGs. Therefore, additional excavation of the site was conducted and the soils, from which Sample VCXX-95-0118 was taken, were removed during the excavation. Subsequently, three additional confirmatory samples (VCXX-95-0271, -95-0272, and -95-0273) were collected. The reported concentrations for all aroclors in the second set of confirmatory data were below their respective detection limits. Although the calculated 95% UCL of the mean for aroclor-1248 (0.82 mg/kg) was slightly above its PRG (0.74 mg/kg), the 95% UCL of the mean for total PCBs (i.e., 0.26 mg/kg) was more than a factor of 2 less than the PCB PRG (0.74 mg/kg). Analytical results and their comparison with the PRGs are presented in Table 1. All previously obtained site characterization data, as well as VCA data, are available and will be provided upon request.

During the cleanup, the site and waste were field screened for gross alpha/beta/gamma radioactivity and for volatile organic vapors using hand-held instruments. No radioactive or hazardous contaminants were found to be above background levels. The initial set of confirmatory samples was collected on September 8, 1995. The final set of confirmatory samples was collected on September 22, 1995. The samples were surface soil samples collected at the locations shown in Figure 2. The samples were analyzed for PCBs using SW-846 method 8080 and for TAL metals using SW-846 methods 6010 and 7471. TAL metals results were not presented because there were no inorganics driving the cleanup and all results were below their respective PRGs.

At the conclusion of the VCA, the containerized waste was appropriately labeled and is being stored at the site pending disposal. The total waste volume is about 21 cubic yards, including the PPE. The waste will be transported to the appropriate disposal site following evaluation of the waste analyses and completion of the appropriate waste disposal documentation.

Site restoration will consist of filling the excavated area with clean material, recontouring, and reseeding the site with native grasses.

#### REQUEST FOR REGULATORY CONCURRENCE

The results of the activities presented herein serve as the formal request for regulator concurrence to remove PRS 39-007(a) from the HSWA module.

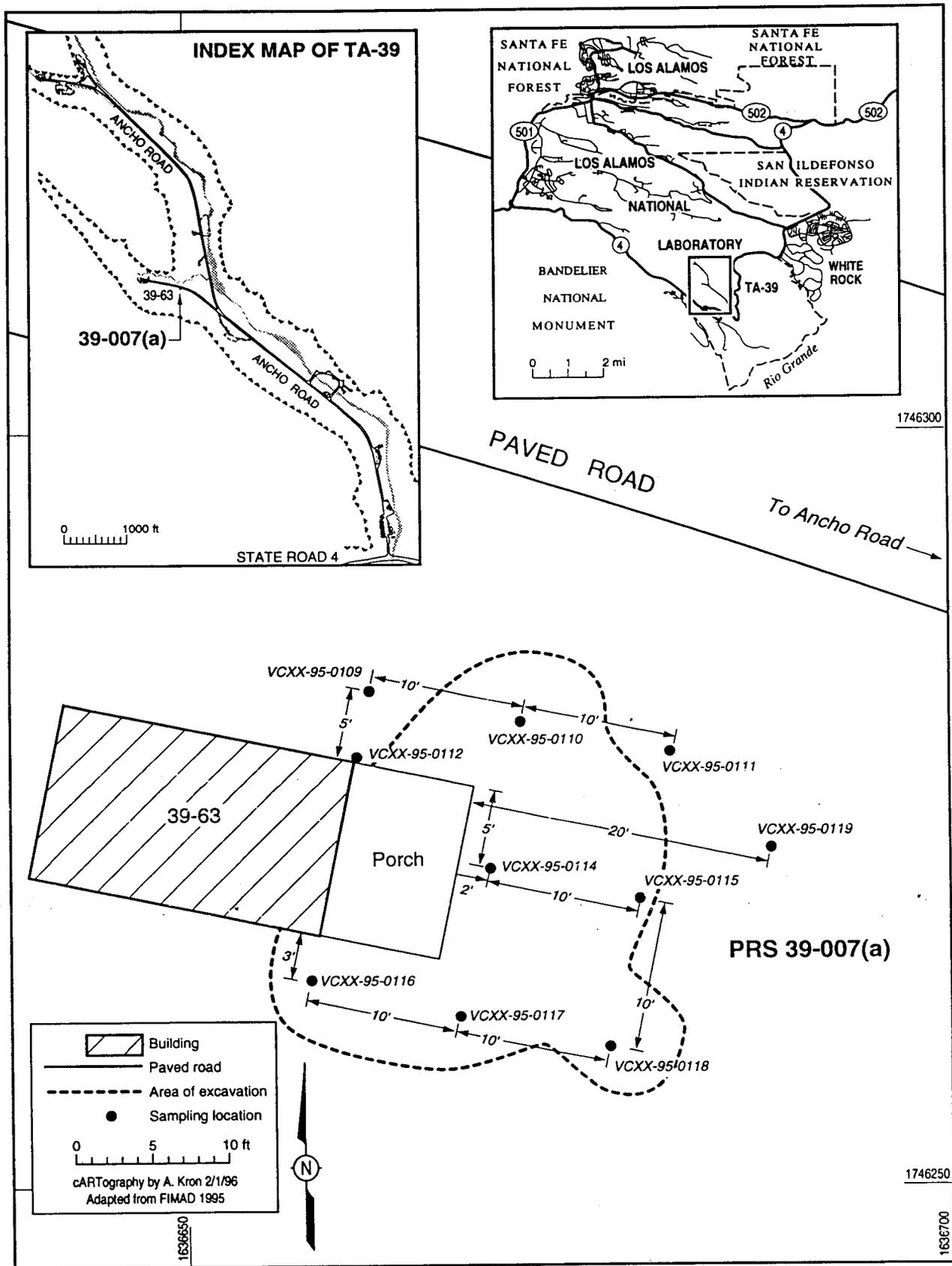


Figure 1. Excavation and sampling locations for PRS 39-007(a), waste container storage area.

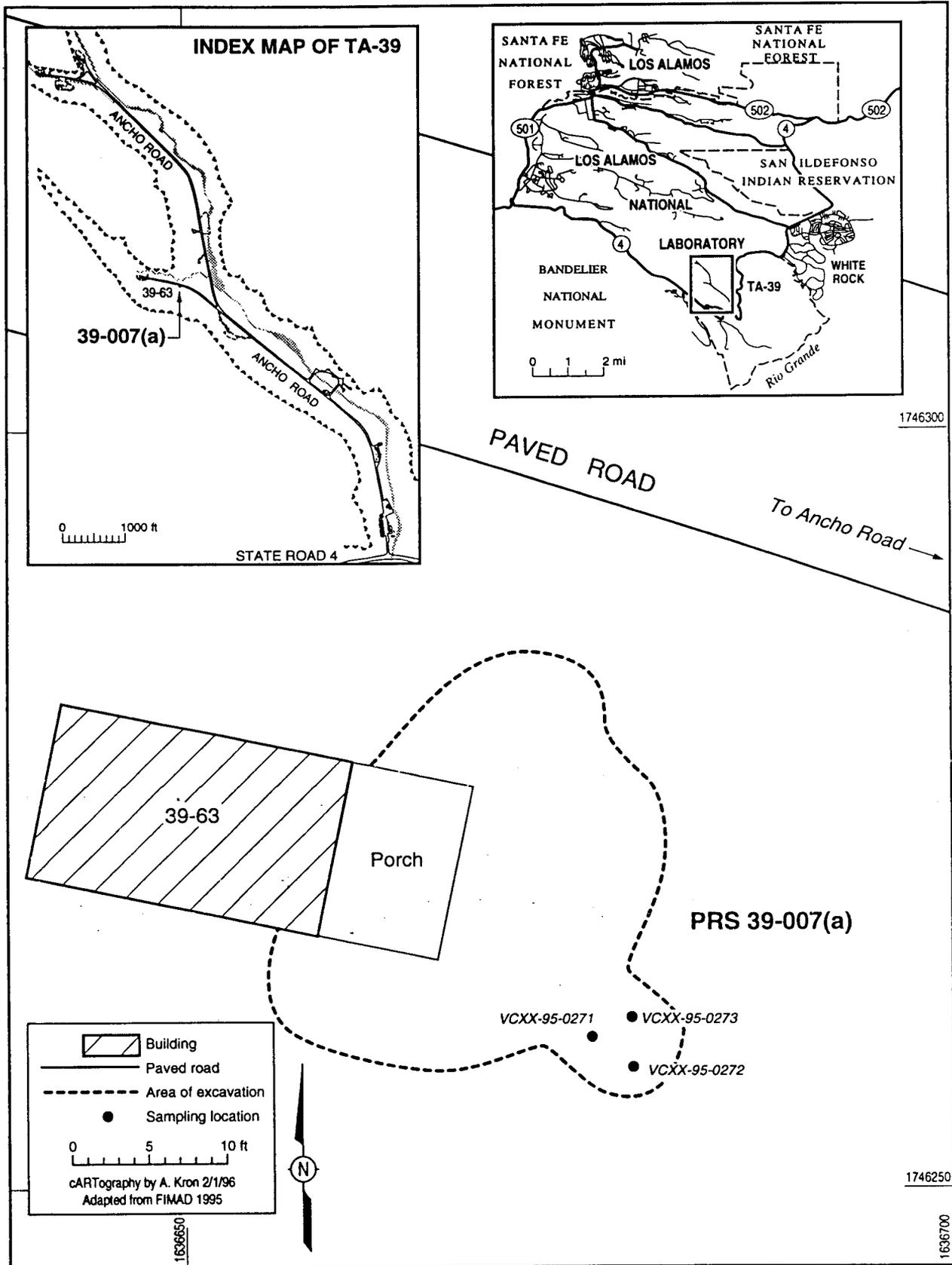


Figure 2. Additional confirmatory sampling locations for PRS 39-007(a), waste container storage area.

TABLE 1

**CONFIRMATORY SAMPLING SUMMARY OF ANALYTICAL  
RESULTS AND DATA COMPARISON  
PRS 39-007(a) - WASTE CONTAINER STORAGE AREA**

Analyte	Location ID	Sample ID	Matrix	Sample Value	Units	Depth (in.)	Analysis Qualifier
Aroclor-1016	39-01455	VCXX-95-0109	Soil	0.0411	mg/kg	0-6	U
Aroclor-1016	39-01456	VCXX-95-0110	Soil	0.408	mg/kg	0-6	U
Aroclor-1016	39-01457	VCXX-95-0111	Soil	0.041	mg/kg	0-6	U
Aroclor-1016	39-01470	VCXX-95-0119	Soil	0.412	mg/kg	0-6	U
Aroclor-1016	39-01469	VCXX-95-0118	Soil	4.13	mg/kg	0-6	U
Aroclor-1016	39-01468	VCXX-95-0117	Soil	0.0413	mg/kg	0-6	U
Aroclor-1016	39-01467	VCXX-95-0116	Soil	0.0407	mg/kg	0-6	U
Aroclor-1016	39-01466	VCXX-95-0115	Soil	0.411	mg/kg	0-6	U
Aroclor-1016	39-01465	VCXX-95-0114	Soil	0.0414	mg/kg	0-6	U
Aroclor-1016	39-01458	VCXX-95-0112	Soil	0.0415	mg/kg	0-6	U
Aroclor-1016	39-01471	VCXX-95-0271	Soil	0.041	mg/kg	0-6	UJ
Aroclor-1016	39-01472	VCXX-95-0272	Soil	0.041	mg/kg	0-6	U
Aroclor-1016	39-01473	VCXX-95-0273	Soil	0.042	mg/kg	0-6	U
95% UCL of Mean				ND			
PRG				1.43E+02	mg/kg		
Aroclor-1221	39-01455	VCXX-95-0109	Soil	0.0411	mg/kg	0-6	U
Aroclor-1221	39-01468	VCXX-95-0117	Soil	0.0413	mg/kg	0-6	U
Aroclor-1221	39-01467	VCXX-95-0116	Soil	0.0407	mg/kg	0-6	U
Aroclor-1221	39-01470	VCXX-95-0119	Soil	0.412	mg/kg	0-6	U
Aroclor-1221	39-01469	VCXX-95-0118	Soil	4.13	mg/kg	0-6	U
Aroclor-1221	39-01466	VCXX-95-0115	Soil	0.411	mg/kg	0-6	U
Aroclor-1221	39-01465	VCXX-95-0114	Soil	0.0414	mg/kg	0-6	U
Aroclor-1221	39-01458	VCXX-95-0112	Soil	0.0415	mg/kg	0-6	U
Aroclor-1221	39-01457	VCXX-95-0111	Soil	0.041	mg/kg	0-6	U
Aroclor-1221	39-01456	VCXX-95-0110	Soil	0.408	mg/kg	0-6	U
Aroclor-1221	39-01471	VCXX-95-0271	Soil	0.041	mg/kg	0-6	UJ
Aroclor-1221	39-01472	VCXX-95-0272	Soil	0.041	mg/kg	0-6	U
Aroclor-1221	39-01473	VCXX-95-0273	Soil	0.042	mg/kg	0-6	U
95% UCL of Mean				ND			
PRG				7.43E-01	mg/kg		
Aroclor-1232	39-01455	VCXX-95-0109	Soil	0.0411	mg/kg	0-6	U
Aroclor-1232	39-01470	VCXX-95-0119	Soil	0.412	mg/kg	0-6	U
Aroclor-1232	39-01469	VCXX-95-0118	Soil	4.13	mg/kg	0-6	U

J The analytical result is an estimated quantity.

U Material analyzed for but not detected. Analytical result reported is less than the sample quantitation limit.

TABLE 1

**CONFIRMATORY SAMPLING SUMMARY OF ANALYTICAL  
RESULTS AND DATA COMPARISON  
PRS 39-007(a) - WASTE CONTAINER STORAGE AREA  
(continued)**

Analyte	Location ID	Sample ID	Matrix	Sample Value	Units	Depth (in.)	Analysis Qualifier
Aroclor-1232	39-01468	VCXX-95-0117	Soil	0.0413	mg/kg	0-6	U
Aroclor-1232	39-01467	VCXX-95-0116	Soil	0.0407	mg/kg	0-6	U
Aroclor-1232	39-01466	VCXX-95-0115	Soil	0.411	mg/kg	0-6	U
Sample VCXX-95-0118 was removed and therefore, 95% UCL of means for Aroclor 1248, 1254, and 1260 do not include this sample.							
Aroclor-1232	39-01465	VCXX-95-0114	Soil	0.0414	mg/kg	0-6	U
Aroclor-1232	39-01458	VCXX-95-0112	Soil	0.0415	mg/kg	0-6	U
Aroclor-1232	39-01457	VCXX-95-0111	Soil	0.041	mg/kg	0-6	U
Aroclor-1232	39-01456	VCXX-95-0110	Soil	0.408	mg/kg	0-6	U
Aroclor-1232	39-01471	VCXX-95-0271	Soil	0.041	mg/kg	0-6	UJ
Aroclor-1232	39-01472	VCXX-95-0272	Soil	0.041	mg/kg	0-6	U
Aroclor-1232	39-01473	VCXX-95-0273	Soil	0.042	mg/kg	0-6	U
95% UCL of Mean				ND			
PRG				7.43E-01	mg/kg		
Aroclor-1242	39-01455	VCXX-95-0109	Soil	0.0411	mg/kg	0-6	U
Aroclor-1242	39-01470	VCXX-95-0119	Soil	0.412	mg/kg	0-6	U
Aroclor-1242	39-01469	VCXX-95-0118	Soil	4.13	mg/kg	0-6	U
Aroclor-1242	39-01468	VCXX-95-0117	Soil	0.0413	mg/kg	0-6	U
Aroclor-1242	39-01465	VCXX-95-0114	Soil	0.0414	mg/kg	0-6	U
Aroclor-1242	39-01457	VCXX-95-0111	Soil	0.041	mg/kg	0-6	U
Aroclor-1242	39-01467	VCXX-95-0116	Soil	0.0407	mg/kg	0-6	U
Aroclor-1242	39-01466	VCXX-95-0115	Soil	0.411	mg/kg	0-6	U
Aroclor-1242	39-01458	VCXX-95-0112	Soil	0.0415	mg/kg	0-6	U
Aroclor-1242	39-01456	VCXX-95-0110	Soil	0.408	mg/kg	0-6	U
Aroclor-1242	39-01471	VCXX-95-0271	Soil	0.041	mg/kg	0-6	UJ
Aroclor-1242	39-01472	VCXX-95-0272	Soil	0.041	mg/kg	0-6	U
Aroclor-1242	39-01473	VCXX-95-0273	Soil	0.0412	mg/kg	0-6	U
95% UCL of Mean				ND			
PRG				7.43E-01	mg/kg		
Aroclor-1248	39-01455	VCXX-95-0109	Soil	0.112	mg/kg	0-6	
Aroclor-1248	39-01470	VCXX-95-0119	Soil	0.56	mg/kg	0-6	
Aroclor-1248	39-01469	VCXX-95-0118	Soil	20.5	mg/kg	0-6	

J The analytical result is an estimated quantity.

U Material analyzed for but not detected. Analytical result reported is less than the sample quantitation limit.

TABLE 1

**CONFIRMATORY SAMPLING SUMMARY OF ANALYTICAL  
RESULTS AND DATA COMPARISON  
PRS 39-007(a) - WASTE CONTAINER STORAGE AREA  
(continued)**

Analyte	Location ID	Sample ID	Matrix	Sample Value	Units	Depth (in.)	Analysis Qualifier
Aroclor-1248	39-01468	VCXX-95-0117	Soil	0.0529	mg/kg	0-6	
Aroclor-1248	39-01467	VCXX-95-0116	Soil	0.0358	mg/kg	0-6	J
Aroclor-1248	39-01466	VCXX-95-0115	Soil	2.6	mg/kg	0-6	
Aroclor-1248	39-01465	VCXX-95-0114	Soil	0.0961	mg/kg	0-6	
Aroclor-1248	39-01458	VCXX-95-0112	Soil	0.0415	mg/kg	0-6	U
Aroclor-1248	39-01457	VCXX-95-0111	Soil	0.112	mg/kg	0-6	
Aroclor-1248	39-01456	VCXX-95-0110	Soil	1.31	mg/kg	0-6	
Aroclor-1248	39-01471	VCXX-95-0271	Soil	0.041	mg/kg	0-6	UJ
Aroclor-1248	39-01472	VCXX-95-0272	Soil	0.041	mg/kg	0-6	U
Aroclor-1248	39-01473	VCXX-95-0273	Soil	0.042	mg/kg	0-6	U
Sample VCXX-95-0118 was removed and therefore, 95% UCL of means for Aroclor 1248, 1254, and 1260 do not include this sample.							
95% UCL of Mean				0.822			
PRG				7.43E-01	mg/kg		
Aroclor-1254	39-01455	VCXX-95-0109	Soil	0.151	mg/kg	0-6	
Aroclor-1254	39-01470	VCXX-95-0119	Soil	1.51	mg/kg	0-6	
Aroclor-1254	39-01469	VCXX-95-0118	Soil	13.1	mg/kg	0-6	
Aroclor-1254	39-01468	VCXX-95-0117	Soil	0.0373	mg/kg	0-6	
Aroclor-1254	39-01456	VCXX-95-0110	Soil	0.458	mg/kg	0-6	
Aroclor-1254	39-01457	VCXX-95-0111	Soil	0.0525	mg/kg	0-6	
Aroclor-1254	39-01465	VCXX-95-0114	Soil	0.0331	mg/kg	0-6	U
Aroclor-1254	39-01467	VCXX-95-0116	Soil	0.0381	mg/kg	0-6	
Aroclor-1254	39-01466	VCXX-95-0115	Soil	0.708	mg/kg	0-6	
Aroclor-1254	39-01458	VCXX-95-0112	Soil	0.0398	mg/kg	0-6	
Aroclor-1254	39-01471	VCXX-95-0271	Soil	0.041	mg/kg	0-6	U
Aroclor-1254	39-01472	VCXX-95-0272	Soil	0.041	mg/kg	0-6	U
Aroclor-1254	39-01473	VCXX-95-0273	Soil	0.042	mg/kg	0-6	U
95% UCL of Mean				0.492			
PRG				7.43E-01	mg/kg		
Aroclor-1260	39-01455	VCXX-95-0109	Soil	0.071	mg/kg	0-6	
Aroclor-1260	39-01470	VCXX-95-0119	Soil	1.23	mg/kg	0-6	
Aroclor-1260	39-01469	VCXX-95-0118	Soil	7.36	mg/kg	0-6	

J The analytical result is an estimated quantity.

U Material analyzed for but not detected. Analytical result reported is less than the sample quantitation limit.

TABLE 1

**CONFIRMATORY SAMPLING SUMMARY OF ANALYTICAL RESULTS AND DATA COMPARISON  
PRS 39-007(a) - WASTE CONTAINER STORAGE AREA  
(concluded)**

Analyte	Location ID	Sample ID	Matrix	Sample Value	Units	Depth (in.)	Analysis Qualifier
Aroclor-1260	39-01468	VCXX-95-0117	Soil	0.0413	mg/kg	0-6	U
Aroclor-1260	39-01467	VCXX-95-0116	Soil	0.0407	mg/kg	0-6	U
Aroclor-1260	39-01466	VCXX-95-0115	Soil	0.592	mg/kg	0-6	
Aroclor-1260	39-01465	VCXX-95-0114	Soil	0.0364	mg/kg	0-6	J
Aroclor-1260	39-01458	VCXX-95-0112	Soil	0.0415	mg/kg	0-6	U
Aroclor-1260	39-01456	VCXX-95-0110	Soil	0.392	mg/kg	0-6	J
Aroclor-1260	39-01457	VCXX-95-0111	Soil	0.046	mg/kg	0-6	
Aroclor-1260	39-01471	VCXX-95-0271	Soil	0.041	mg/kg	0-6	UJ
Aroclor-1260	39-01472	VCXX-95-0272	Soil	0.041	mg/kg	0-6	U
Aroclor-1260	39-01473	VCXX-95-0273	Soil	0.042	mg/kg	0-6	U
95% UCL of Mean				0.406			
PRG				7.43E-01	mg/kg		
TOTAL PCBs 95% UCL on Mean				0.258			
PRG				7.43E-01			
Sample VCXX-95-0118 was removed and therefore, 95% UCL of means for Aroclor 1248, 1254, and 1260 do not include this sample.							

J The analytical result is an estimated quantity.

U Material analyzed for but not detected. Analytical result reported is less than the sample quantitation limit.

## CERTIFICATION OF COMPLETION

I certify that all work pertaining to the voluntary corrective action (VCA) 39-007(a) has been completed in accordance with the Department of Energy-approved VCA plan and entitled **VCA Plan for Potential Release Site 39-007(a), Waste Container Storage Area**. Based on my personal involvement or inquiry of the person or persons who managed this cleanup, a review of all data gathered, and a visit to the site, to the best of my knowledge and belief, all criteria of the plan have been met or exceeded. I believe that the completion of this VCA is protective to both human health and the environment. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

*T. Eugene Gould*  
T. Eugene Gould  
Field Unit Two Project Leader  
Environmental Restoration Project  
Los Alamos National Laboratory

9/27/95  
Date Signed